

CLAIMS

1. An image generation system comprising:

means for generating a motion of an object formed by a plurality of parts, by moving an Nth part through a physical simulation based on hit information when the Nth part is hit and sequentially transmitting the hit information to the N+1th, N+2th, N+3th parts so that the N+1th, the N+2th, the N+3th parts are sequentially moved through a physical simulation based on the transmitted hit information; and

means for generating an image including an image of the object on which the motion is generated.

2. The image generation system according to claim 1,

wherein the hit information is a force vector in the direction of hitting, and

wherein each of the parts is moved through a rotation moment obtained by the force vector.

3. The image generation system according to claim 2,

wherein the magnitude of the force vector is sequentially attenuated while being transmitted to each of the parts.

4. The image generation system according to claim 1,

wherein a rotational resistance force acts on each of the parts depending on the angular velocity of each of the parts.

5. The image generation system according to claim 1,
wherein a restoring force for returning an object back
to a given posture acts on each of the parts.

5 6. The image generation system according to claim 1,
wherein processing is switched from a play of the object's
motion based on motion data to a generation of the object's
motion through the physical simulation when the object is hit.

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Cont 10 7. The image generation system according to claim 1,
wherein processing is switched from a generation of the
object's motion through the physical simulation to a play of
the object's motion based on motion data when a given condition
is satisfied.

15 8. An image generation system comprising:
means for playing a motion of an object formed by a
plurality of parts based on motion data;
means for generating the motion of the object through a
20 physical simulation; and

means for switching processing from a play of the object's
motion based on motion data to a generation of the object's
motion through a physical simulation when the object is hit.

25 9. An image generation system comprising:
means for playing a motion of an object formed by a
plurality of parts based on motion data;

means for generating the motion of the object through a physical simulation; and

means for switching processing from a generation of the object's motion through a physical simulation to a play of the object's motion based on the motion data when a given condition is satisfied.

10. The image generation system according to claim 9,
wherein processing is switched from the generation of the object's motion through the physical simulation to the play of the object's motion based on the motion data, in at least one of cases where a given time period has elapsed after the object has been hit and where a parameter relating to the object reaches a given value.

11. The image generation system according to claim 8,
wherein the object is caused to perform a connecting motion which connects a motion generated by the physical simulation with a motion played based on the motion data.

12. The image generation system according to claim 9,
wherein the object is caused to perform a connecting motion which connects a motion generated by the physical simulation with a motion played based on the motion data.

13. A computer-usable program embodied in an information storage medium or a carrier wave, comprising a processing

routine for realizing:

means for generating a motion of an object formed by a plurality of parts, by moving an Nth part through a physical simulation based on hit information when the Nth part is hit and sequentially transmitting the hit information to the N+1th, N+2th, N+3th parts so that the N+1th, the N+2th, the N+3th parts are sequentially moved through a physical simulation based on the transmitted hit information; and

means for generating an image including an image of the object on which the motion is generated.

14. The program according to claim 13,

wherein the hit information is a force vector in the direction of hitting, and

wherein each of the parts is moved through a rotation moment obtained by the force vector.

15. The program according to claim 14,

wherein the magnitude of the force vector is sequentially attenuated while being transmitted to each of the parts.

16. The program according to claim 13,

wherein a rotational resistance force acts on each of the parts depending on the angular velocity of each of the parts.

17. The program according to claim 13,

wherein a restoring force for returning an object back

to a given posture acts on each of the parts.

18. The program according to claim 13,

wherein processing is switched from a play of the object's
5 motion based on motion data to a generation of the object's
motion through the physical simulation when the object is hit.

19. The program according to claim 13,

wherein processing is switched from a generation of the
10 object's motion through the physical simulation to a play of
the object's motion based on motion data when a given condition
is satisfied.

20. A computer-usable program embodied in an information
15 storage medium or a carrier wave, comprising a processing
routine for realizing:

means for playing a motion of an object formed by a
plurality of parts based on motion data;

means for generating the motion of the object through a
20 physical simulation; and

means for switching processing from a play of the object's
motion based on motion data to a generation of the object's
motion through a physical simulation when the object is hit.

25 21. A computer-usable program embodied in an information
storage medium or a carrier wave, comprising a processing
routine for realizing:

means for playing a motion of an object formed by a plurality of parts based on motion data;

means for generating the motion of the object through a physical simulation; and

5 means for switching processing from a generation of the object's motion through a physical simulation to a play of the object's motion based on the motion data when a given condition is satisfied.

22. The program according to claim 21,

wherein processing is switched from the generation of the object's motion through the physical simulation to the play of the object's motion based on the motion data, in at least one of cases where a given time period has elapsed after the object
15 has been hit and where a parameter relating to the object reaches a given value.

23. The program according to claim 20,

wherein the object is caused to perform a connecting motion
20 which connects a motion generated by the physical simulation with a motion played based on the motion data.

24. The program according to claim 21,

wherein the object is caused to perform a connecting motion
25 which connects a motion generated by the physical simulation with a motion played based on the motion data.